

DERWENT-ACC-NO: 1994-335652

DERWENT-WEEK: 199442

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TITLE: Generating heat by nuclear fusion reaction -
using a fusion reactor contg. palladium@ or titanium@
cathode and heavy water electrolyte

PATENT-ASSIGNEE: JAPAN ATOMIC ENERGY RES INST[JAAT]

PRIORITY-DATA: 1993JP-0045415 (March 5, 1993)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE
PAGES MAIN-IPC		
JP 06258469 A	September 16, 1994	N/A
G21B 001/00		004

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO
APPL-DATE		
JP 06258469A	N/A	1993JP-0045415
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INT-CL (IPC): G21B001/00, G21G001/00 , G21H003/00

ABSTRACTED-PUB-NO: JP 06258469A

BASIC-ABSTRACT:

In a fusion reactor contg. a palladium or titanium cathode and an anode, a circulated electrolyte made of deuterium oxide, tritium water or their mixed solution is electrolysed to generate an isotope of hydrogen for storing the same in the cathode. Then radial rays are applied to the cathode to cause nuclear fusion reaction in it so that the electrolyte may be heated to gain thermal energy by heat exchange.

A coolant electrolyte is circulated into an electrolyser in the reactor via a duct by a pump, heated in the reactor and circulated back to a heat exchanger through a vapour-liquid separator. Electron beams accelerated to an energy of about 100 keV or more are applied to the hydrogen isotope storage cathode by an

electron beam generator.

USE/ADVANTAGE - Nuclear fusion reaction can be caused without fail,
thus
heating the circulated electrolyte to continuously take out thermal
energy from
it.

CHOSEN-DRAWING: Dwg.0/1

TITLE-TERMS: GENERATE HEAT NUCLEAR FUSE REACT FUSE REACTOR CONTAIN
PALLADIUM@
TITANIUM@ CATHODE HEAVY WATER ELECTROLYTIC

DERWENT-CLASS: K05 X14

CPI-CODES: K05-A03; K06-X;

EPI-CODES: X14-A03A;

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1994-152547

Non-CPI Secondary Accession Numbers: N1994-263539